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Required Report - public distribution

Date: 7/19/2012

GAIN Report Number:

Senegal

Agricultural Biotechnology Annual

2012 Francophone West Africa Biotechnology Report

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Report Highlights:

This report is an update of the 2011 Biotechnology report for francophone West Africa. Of note, Senegal has installed an Executive Director for the *National Biosafety Authority* (NBA) and designated members to the *National Biotechnology Committee* (NBC). Burkina Faso's cotton companies expect a decrease in Bt cotton production in MY 2012/13 from 60 to 40 percent of total production as they impose stricter controls for selecting Bt seeds. Harmonization of the WAEMU (UEMOA), CILSS and ECOWAS (CEDEAO) regional biosafety framework is still in progress even as Burkina Faso continues to work on amending its biosafety law.

Section I. Executive Summary:

After ratification of the Cartagena Protocol on biosafety and signing of the national biosafety law in 2009, Senegal has finally installed an Executive Director of the NBA and members of the NBC. Since 2010, WAEMU [1], ECOWAS [2] and CILSS [3] continue to work on the harmonization of regional biosafety regulations. Country members provided comments which are being incorporated in a final draft before final approval by all countries.

Bt cotton production in Burkina Faso will likely see a decrease of 20 percent in MY 2012/13, because cotton companies want better quality Bt seeds having at least 96 percent Bt gene so there will be less seeds available.

Burkina Faso has completed the first year of *Confined Field Trials* (CFTs) for Bt cowpea and expects to continue in MY 2012/13.

Section II. Plant Biotechnology Trade and Production:

Cotton companies will require that cotton seeds distributed contain at least 96 percent Bt gene.. This push to be more selective means a smaller, more focused pool of seeds will be used, and stricter control of seed multiplication will mean cutting out multipliers who can't meet standard. Therefore, Burkina Faso's cotton companies anticipate a 20 percent decrease of Bt cotton production for MY 2012/13 compared to the previous year. The number of farmers producing Bt seeds will drop from 12,000 in MY 2011/12 to 5,000 in MY 2012/13. Cotton companies would like to strengthen the seed plan by providing training at all levels, from farm to factory, to reduce the problem of mixed seeds. In addition to chromatographic tests, serologic tests will be performed on seeds to better determine the level of Bt presence.

The *West and Central African Council for Agricultural Research and Development* has an ongoing (CORAF/WE CARD) project to adopt Bt cowpea in select African countries (Burkina Faso, Mali, and Togo). In Burkina Faso, the *Institut de l'Environnement et de Recherches Agricoles* (INERA) has completed the first year of *Confined Field Trials* (CFT) and is expected to continue in MY 2012/13. Cowpea is considered the most important food crop in dry areas of tropical Africa, but is vulnerable to the deadly *Maruca Vitrata* pod borer which slashes yields by 50-70 percent and even up to 80 percent in severe infestations.

^[1] WAEMU (UEMOA) - West African Economic and Monetary Union members includes: Benin, Burkina Faso, Cote d'Ivoire, Guinea Bissau, Mali, Niger, Senegal, and Togo.

^[2] ECOWAS members include: Benin, Burkina Faso, Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone and Togo

^[3] CILSS members include: Gambia, Guinea-Bissau, Mauritania, Senegal, Burkina Faso, Mali, Niger, Chad, and Cape Verde.

Section III. Plant Biotechnology Policy:

Regional Initiatives

WAEMU, ECOWAS and CILSS continue to work on the harmonized regional biosafety framework ongoing since 2010 when country members reviewed the proposed draft and sent in comments. They are being incorporated into a final draft by the three organizations. Post queried about a specific date to expect completion, but was not given any clear answers.

Burkina Faso

Burkina Faso is the only francophone West Africa country that has a functioning biosafety regulatory system, approved commercial release and use of biotech products by farmers and other agricultural users.

Burkina Faso's institutional framework includes its NBA, representing the national authority competent in the domain of Biosafety in Burkina Faso, as well as three consultative bodies, namely:

- National Biosafety Observatory (ONB), the competent consultative body in the domain of Biosafety surveillance and education
- National Biosafety Scientific Committee (CNSB), the competent consultative body in the domain of scientific assessment
- Internal Biosafety Scientific Committee (CSIB), the competent consultative body within the ministries

The NBA is under the authority of the Ministry of Scientific Research and Innovation.

Since July 2011, Burkina Faso's NBA worked on amending the Burkina Faso biosafety law. The primary idea was to improve legal status of the NBA by increasing its autonomy and expand strict liability provisions for damages, including socio-economic damages, caused by products derived from biotechnology. A first draft had been scheduled to be voted on by parliament since July 2011 but has been postponed to allow more time for cotton stakeholders (farmers, cotton companies, and Monsanto, who developed the Burkinabe Bt cotton variety) to provide comments and concerns on the proposed amendment. In the meantime, on November 2011, the *Burkina Biotech Association* (BBA), in partnership with the *African Biosafety Network of Expertise* (ABNE), organized a training session for members of parliament to increase understanding of challenges, benefits and necessity of producing Bt cotton and GMO plants to assist them in evaluating and approving the new amended biosafety draft.

Mali

There has been no further development of Mali's biosafety law since it was signed in December 2008 and the decree adopted in December 2010 outlining GMO testing procedures. Following the 2010 decree, the *Malian National Rural Economy Institute* (IER)'s Board of Directors authorized research on GM cotton in collaboration with CMDT, but there has not been further research.

(Note: For more information on Malian NBC and the NBA see last year's Biotechnology annual report.)

Senegal

It took three years after signing the national biosafety law before the GOS wrote a decree to nominate members of the NBC and Executive Director of the NBA. Senegal's biosafety law was signed in July 2009 and was followed by two decrees issued in December 2009 describing the function, mission and organization of the NBA and NBC.

Per the biosafety law, the Ministry of Ecology and Protection of Nature authorizes importation or use of GMOs. It is supported by the NBA for administrative issues and the NBC for technical ones. The NBC is composed of 26 members, mainly from scientific and law backgrounds, NGOs, media, and consumers associations.

The decree to nominate members of the NBA has not been issued yet. The NBA is expected to include 22 members with six chosen from the NBC and 16 from different ministries. Ministries have already provided names of their representatives at the request of the Presidency and the government's General Secretary.

Members of the NBA (those already designated by their ministry to be part of the NBA) and the NBC already received capacity building training in biotechnology, Genetic Modified Organisms (GMOs), and participated in workshops to harmonize the level of understanding of the Senegalese and regional WAEMU biosafety law. In June 2012, Post met with Professor Coumba Mar Diop, the new Executive Director of the NBA, who said that both NBA and NBC members needed technical capacity building mainly in control, inspection, and risk assessment of GMOs and financial assistance to help translate the biosafety law into different local languages.

The NBA is planning to organize future training sessions in community outreach, and biotechnology risk assessment, and develop a communication plan to better sensitize the community. The NBA will work on at least five new decrees which include labeling, control, and inspection of biotechnology. Prof. Diop believes that communication outreach is one of the most crucial tools to help people understand the basics of biotechnology and better evaluate GMO products. She would like to review and update the Senegalese biosafety law to be more flexible for GMO imports prior to any NBA activities.

Based on Prof. Diop's in-depth scientific knowledge and excellent reputation as a chair at the University Cheikh Anta Diop (UCAD), Post believes she could usher along biotechnology in Senegal and help make the law more functional if there is political support.

In regard to the lack of technical capacity, institutional and regulations in biosafety of WAEMU country members, the WAEMU regional Biosafety program has agreed on a plan for capacity building and equipping national laboratories. On April 2012, WAEMU donated laboratory equipment valuing \$260,000 to the Senegalese Laboratory of Plant Biology of the Faculty of Science and Technology of UCAD. This equipment will allow the laboratory to better perform biosafety and biotechnology analysis for the detection of *Genetically Modified Organisms* (GMOs). This laboratory has been designated as the national reference laboratory in biosafety.

Section IV. Plant Biotechnology Marketing Issues:

Among all Francophone West African countries, only Burkina Faso has a functioning legislation that allows field trials of GMOs. Bt cowpea has been tested for the first year on confined field trials in MY 2011/12. Tests will probably continue for the second year in MY 2012/13.

Section V. Plant Biotechnology Capacity Building and Outreach:

Last Summer, USDA FAS's Cochran Fellowship program sent six participants (2 for Senegal, 1 for Chad, 1 for Mali, and 2 for Burkina Faso) to Michigan State University in East Lansing, Michigan, to attend biotechnology and biosafety short courses. On September 10 - 24, 2011, two fellows from Burkina Faso, one from Senegal and one from Chad attended the biotechnology short course that covered biotechnology research, policies, management, networking, and public outreach components. On July 31 - August 5, 2011, one fellow from Senegal and Mali participated in the biosafety course to learn more about theory and practice of environmental risk assessment and management, as well as communication of biotechnology applications. These participants represented their respective National Agricultural Research Institutes, cotton companies, NBA, and NBC.

Section VI. Animal Biotechnology:

There has been little movement in this domain since last year. The *Senegalese Agricultural Research Institute* (ISRA) and a few other public research centers have ongoing research activities relevant to the production of molecular vaccines for local use. However, output is quite small owing to lack of equipment and funding.

Section VII. References

- African Centre for Biosafety – <http://www.biosafetyafrica.net>
- African Union - New partnership for Africa's development (AU-NEPAD)

<http://www.africa-union.org/root/au/AUC/SpecialPrograms/nepad/nepad.htm> <http://www.nepad.org>

- Convention on Biological Diversity – <http://www.cbd.int/biosafety>
- Interstate Committee for Reducing Desertification in the Sahel (Comité permanent Inter-Etats de Lutte contre la Sécheresse dans le Sahel) - <http://www.cilss.bf>
- Cochran program <http://www.fas.usda.gov/icd/cochran/cochranarchive.asp>
- West and Central African Council for Agricultural Research and Development CORAF/WECARD - <http://www.coraf.org>
- West African Economic and Monetary Union (WAEMU) - <http://www.uemoa.int>

Section VIII. Acronyms

CFTs	Confined Field Trials
CILSS	Interstate Committee for Reducing Desertification in the Sahel
CMDT	Compagnie Malienne pour le Développement des Textiles
CNSB	National Biosafety Scientific Committee
CORAF/WECARD	West and Central African Council for Agricultural Research and Development
CSIB	Internal Biosafety Scientific Committee
ECOWAS	Economic Community of West African States
GM	Genetically Modified
GMOs	Genetically Modified Organisms
GOM	Government of Mali
GOS	Government of Senegal
IER	Institut d'Economie Rurale
INERA	Institut de l'Environnement et de Recherches Agricoles
ISRA	Senegalese Institute for Agricultural Research
NBC	National Biosafety Committee
NBA	National Biosafety Authority
ONB	National Biosafety Observatory
UCAD	University Cheikh Anta Diop
UEMOA/WAEMU	West African Economic and Monetary Union